ARTHUR M. ANDERSON

BOOKLET OF GENERAL PLANS
HULLS 867-8
BUILT BY
LORAIN OHIO PLANT
OF
THE AMERICAN SHIP BUILDING CO.
CLEVELAND OHIO
1951

1 = INDEX OF PLANS
2 = OUTBOARD PROFILE
3 = INBOARD PROFILE
4 = SPAR DECK PLAN
5 = FORWARD CABINS
6 = AFTER CABINS
7 = ENGINE ROOM PLANS
8 = MIDSHIP SECT. AND BHDS.
9 = DATA SHEET

PITTSBURGH STEAMSHIP COMPANY
USS
USS
25'-0" W.L.
220 215 210 205 200 195 190 185 180 175 170 165 160 155 150 145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5

SCALE 1/16" = 1'-0"

SHEET NO. 2 OF 9

LUBE OIL STORAGE TANK
RESERVE FEED WATER TANK
CARGO HOLD NO.3
CARGO HOLD NO.2
CARGO HOLD NO.1
TANK NO.8
TANK NO.7
TANK NO.6
TANK NO.5
TANK NO.4
TANK NO.3
TANK NO.2
TANK NO.1
220
215 W.T. BHD.
210
205
200
195
190
185
W.T.F BHD.
180
175
170
165
W.T.F.
160
155
150
145
W.T.F.
140
135 SCREEN BHD
130
125
W.T.F.
120
115
110
105
W.T.F.
100
95
90
85
W.T.F.
80 SCREEN BHD.
75
70
65
W.T.F.
60
55
50
45
W.T.F.
40
35
30 W.T. BHD.
26
20 W.T. BHD.
15
10
5
2

90½

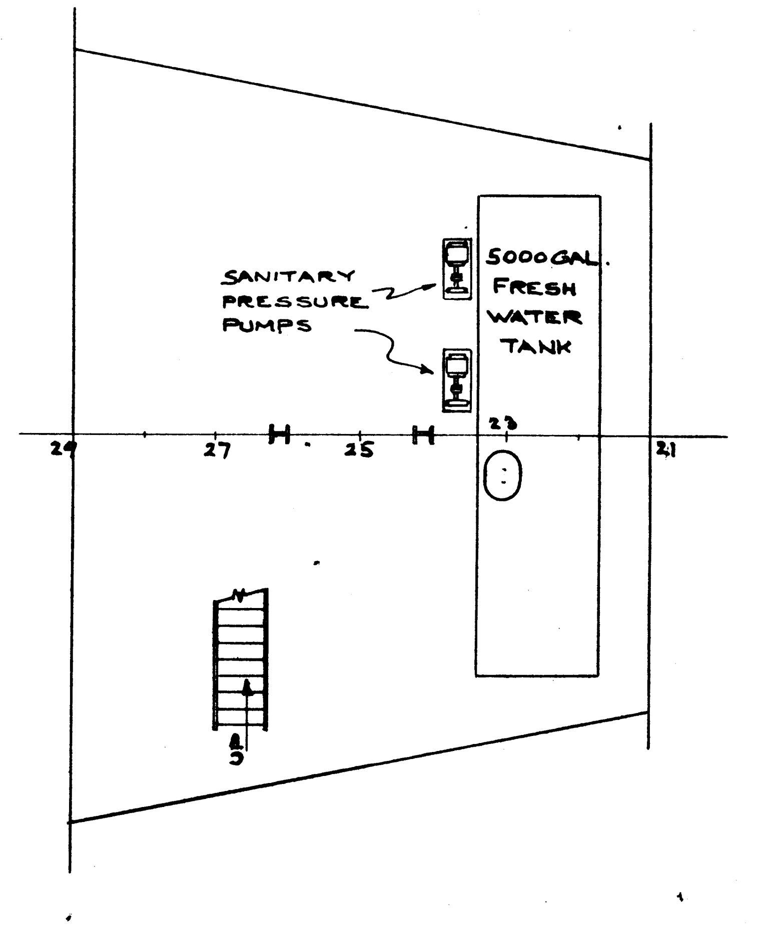
SCALE 1/16" = 1'-0

SHEET No. 3 OF 9

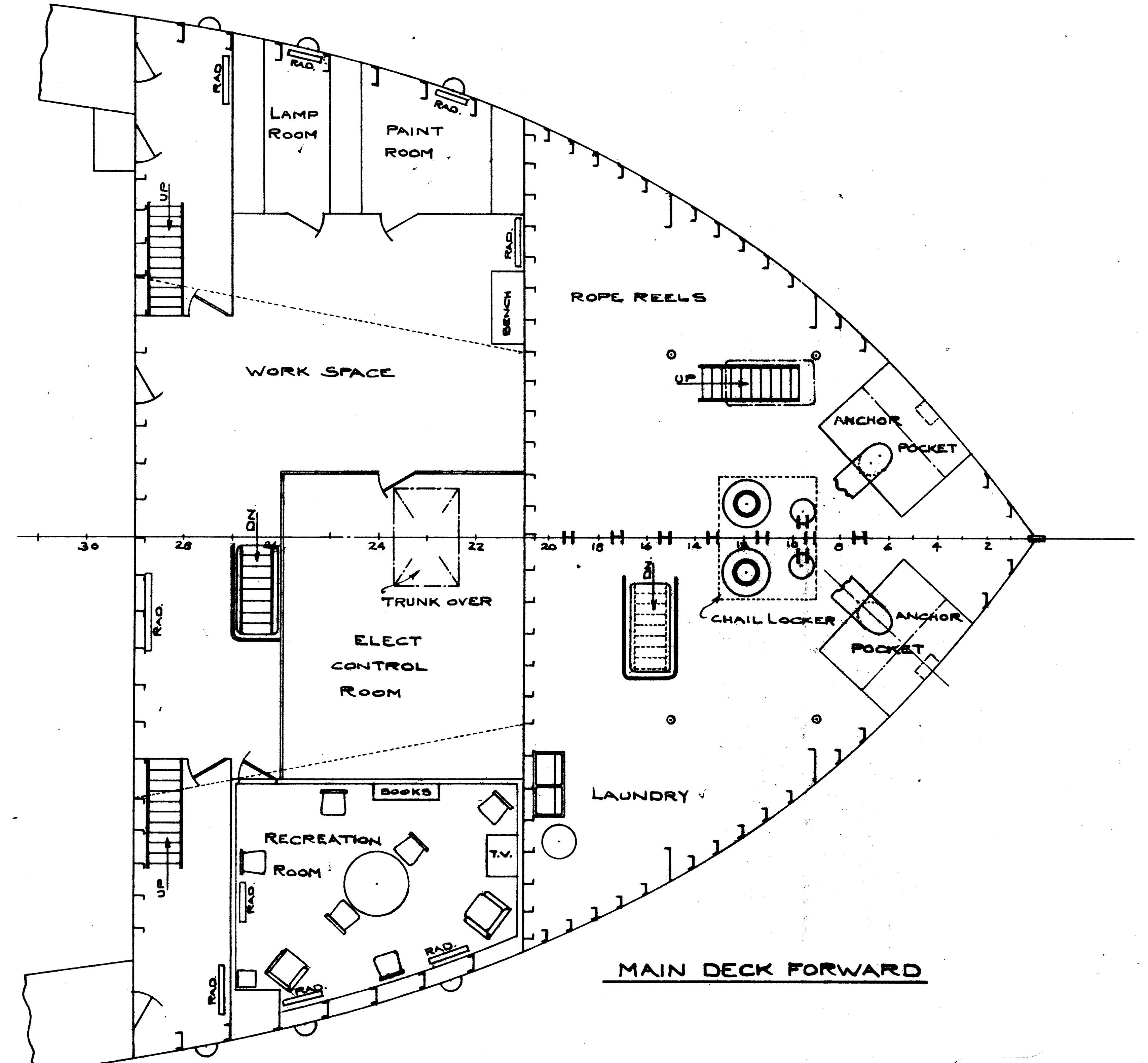
No.18
No.17
No.16
No.15
No.14
No.13
No.12
No.11
No.10
No.9
No.8
No.7
No.6
No.5
No.4
No.3
No.2
No.1
125
220
215
210
205
200
175
170
165
160
155
150
145
140
135
130
125
120
115
110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
25
20
10
5

SCALE 1/16" = 1'-0

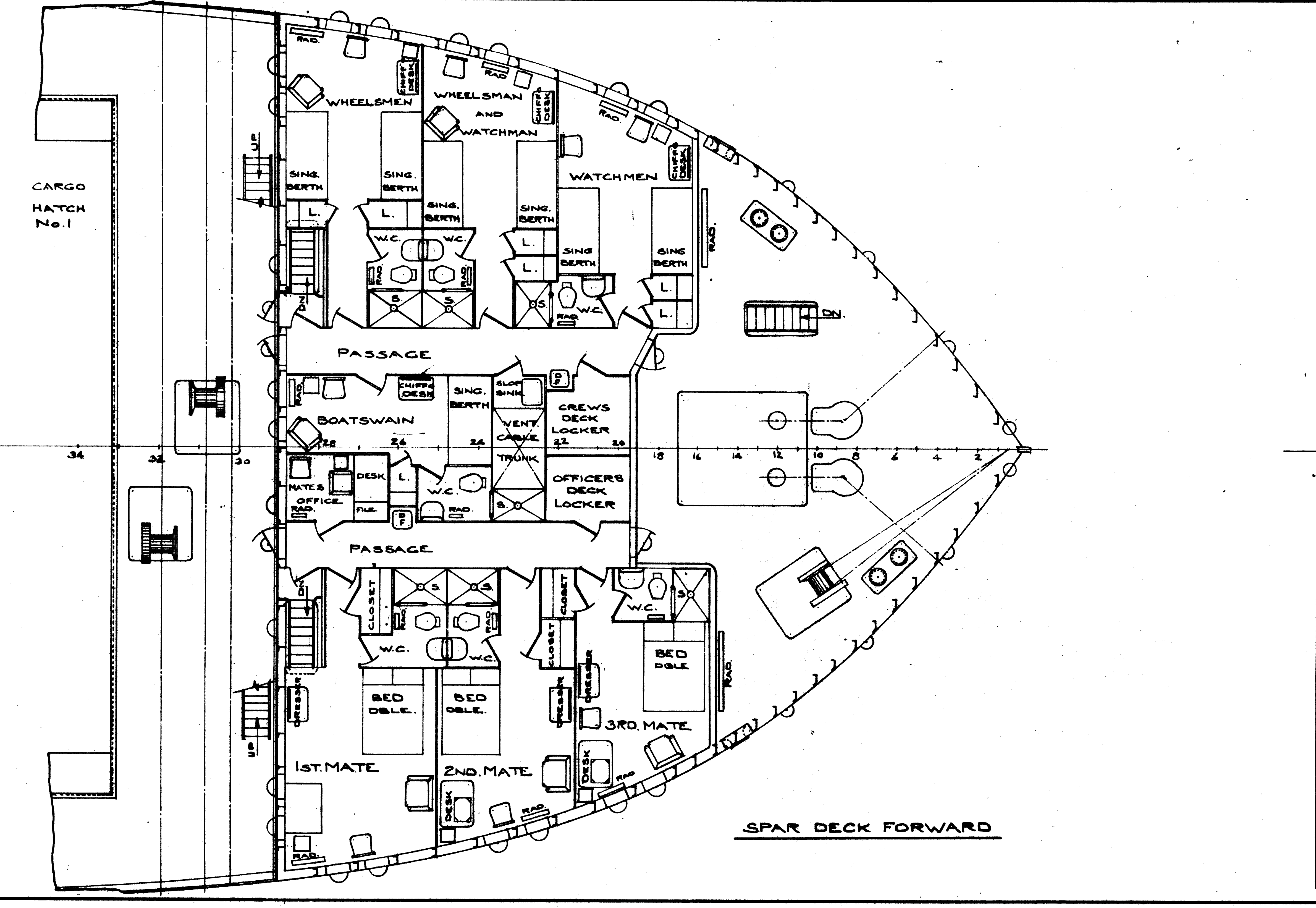
SHEET No. 4 OF 9


SANITARY
PRESSURE
PUMPS
5000 GAL.
FRESH
WATER
TANK
29
27
25
23
21
UP

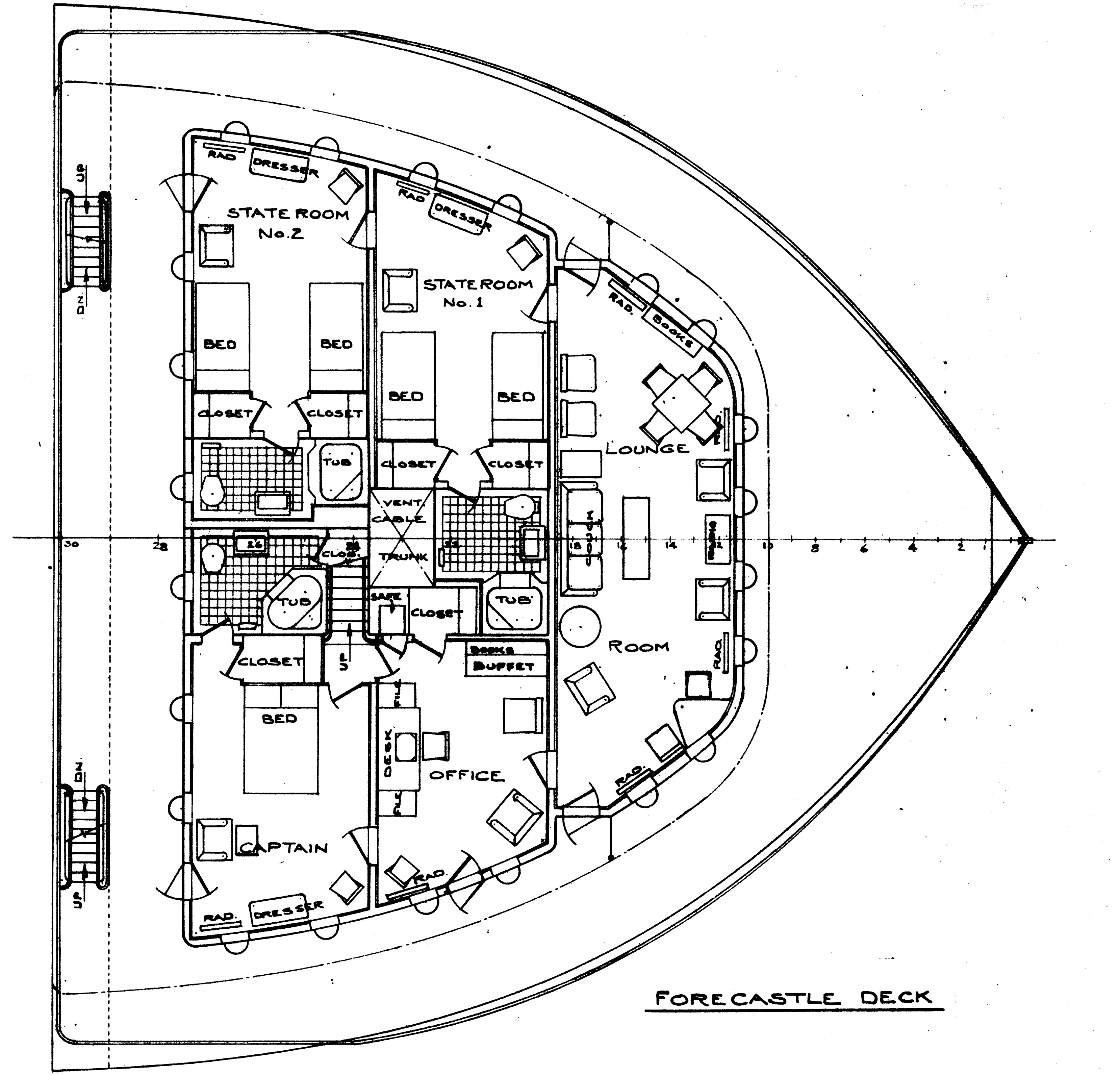
TANK TOP FORWARD


LAMP
ROOM
PAINT
ROOM
RAD.
BENCH
ROPE REELS
WORK SPACE
UP
DN
ANCHOR
POCKET
ANCHOR
POCKET
TRUNK OVER
ELECT
CONTROL
ROOM
CHAIL LOCKER
RECREATION
ROOM
BOOKS
T.V.
LAUNDRY
30
28
24
22
20
18
16
14
12
10
8
6
4
2

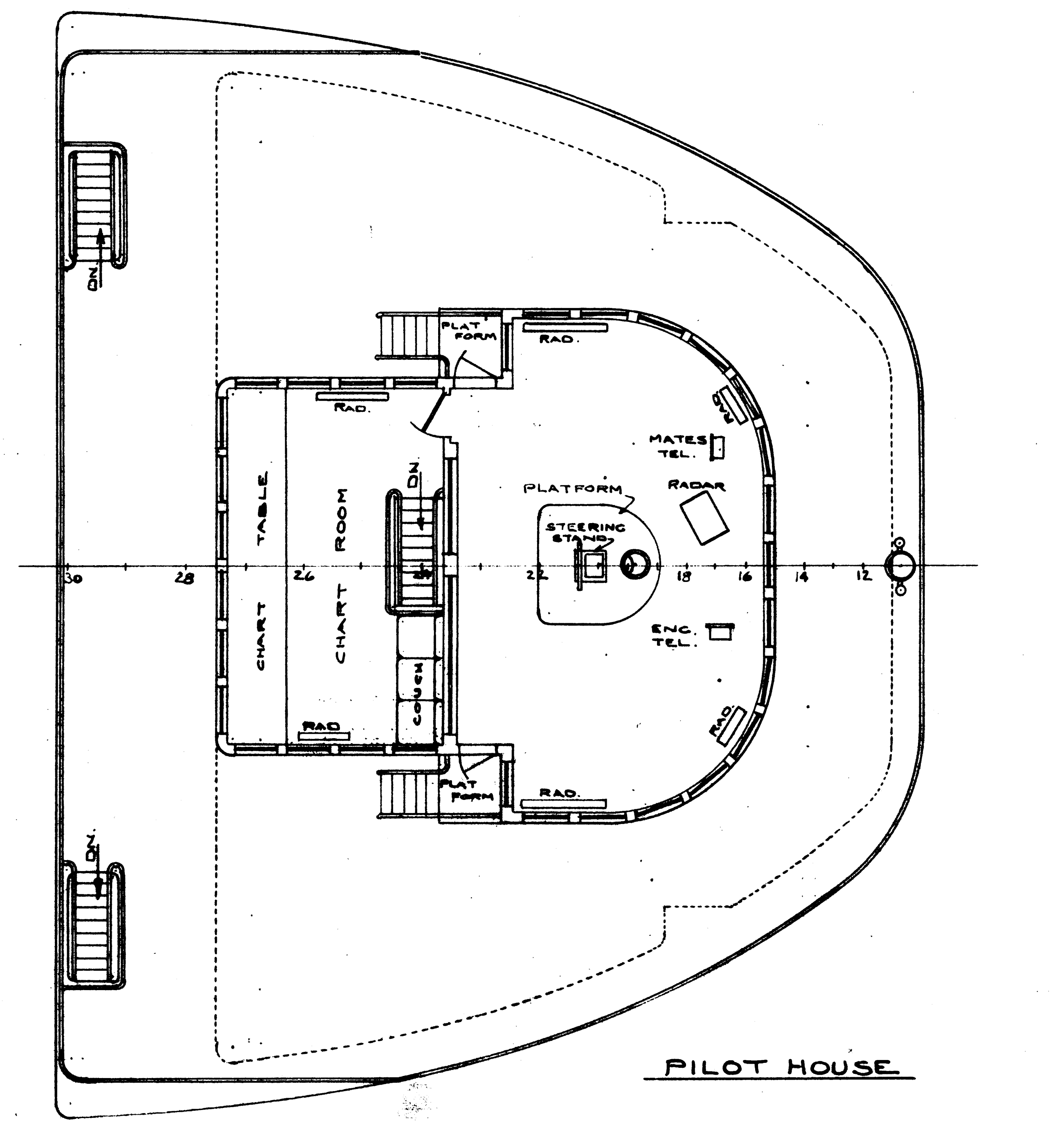
MAIN DECK FORWARD


CARGO
HATCH
No. 1
WHEELSMEN
WHEELSMAN
AND
WATCHMAN
WATCHMEN
CHIEF DESK
SING. BERTH
L.
W.C.
S.
RAD.
PASSAGE
BOATSWAIN
CHIFFO DESK
SLOP SINK
VENT. CABLE TRUNK
CREWS
DECK
LOCKER
MATES
OFFICE
DESK
FILE
OFFICERS
DECK
LOCKER
PASSAGE
CLOSET
BED
DBLE.
DRESSER
DESK
1ST. MATE
2ND. MATE
3RD. MATE
UP
DN
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6

SPAR DECK FORWARD


STATE ROOM
No. 2
STATEROOM
No. 1
RAD
DRESSER
BED
CLOSET
TUB
VENT.
CABLE
TRUNK
SAFE
CLO.
LOUNGE
ROOM
BOOKS
RADIO
BOOKS
BUFFET
OFFICE
DESK
FILE
BED
CAPTAIN
UP
DN
30
28
26
24
22
18
16
14
12
10
8
6
4
2

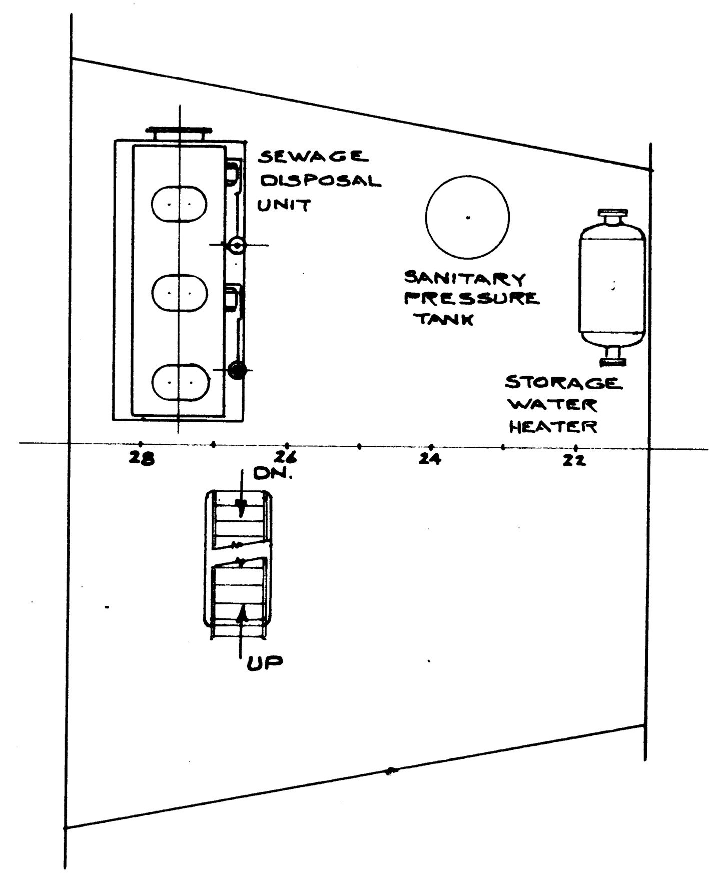
FORECASTLE DECK


PLAT FORM
RAD.
CHART TABLE
CHART ROOM
COUCH
DN
PLATFORM
STEERING STAND
MATES TEL.
RADAR
ENG. TEL.
30
28
26
22
18
16
14
12

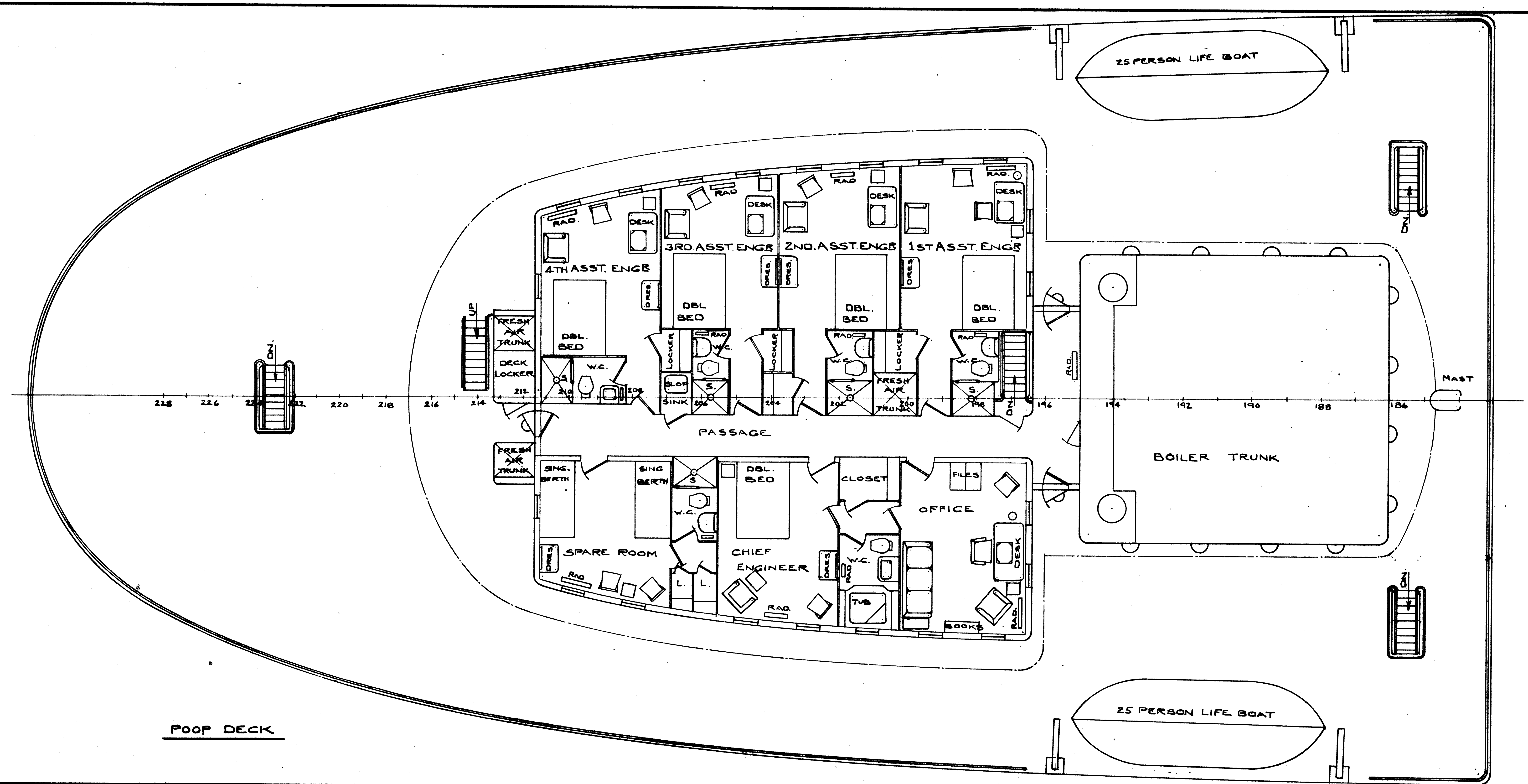
PILOT HOUSE

SCALE 1/8" = 1'-0"

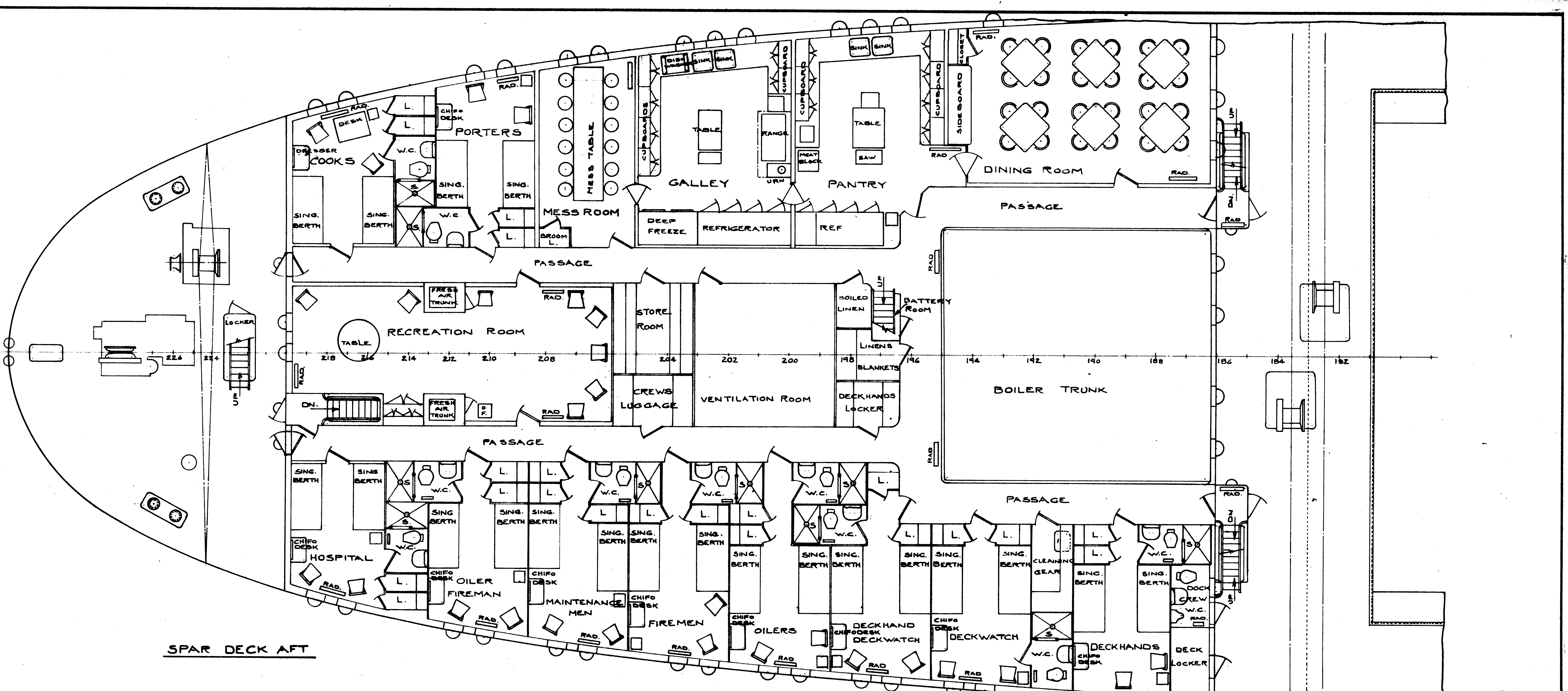
SHEET No. 5 OF 9


SEWAGE DISPOSAL UNIT
SANITARY PRESSURE TANK
STORAGE WATER HEATER
28
26
24
22
DN.
UP

DUNNAGE DECK


25 PERSON LIFE BOAT
4TH ASST. ENGR
3RD. ASST. ENGR
2ND. ASST. ENGR
1ST ASST. ENGR
RAD.
DESK
DRES.
DBL. BED
LOCKER
W.C.
S.
SLOP SINK
FRESH AIR TRUNK
DECK LOCKER
UP
DN.
PASSAGE
SING. BERTH
SPARE ROOM
CHIEF ENGINEER
CLOSET
OFFICE
FILES
BOOKS
TUB
L.
BOILER TRUNK
MAST
218
216
214
212
210
208
206
204
202
200
198
196
194
192
190
188
186
25 PERSON LIFE BOAT

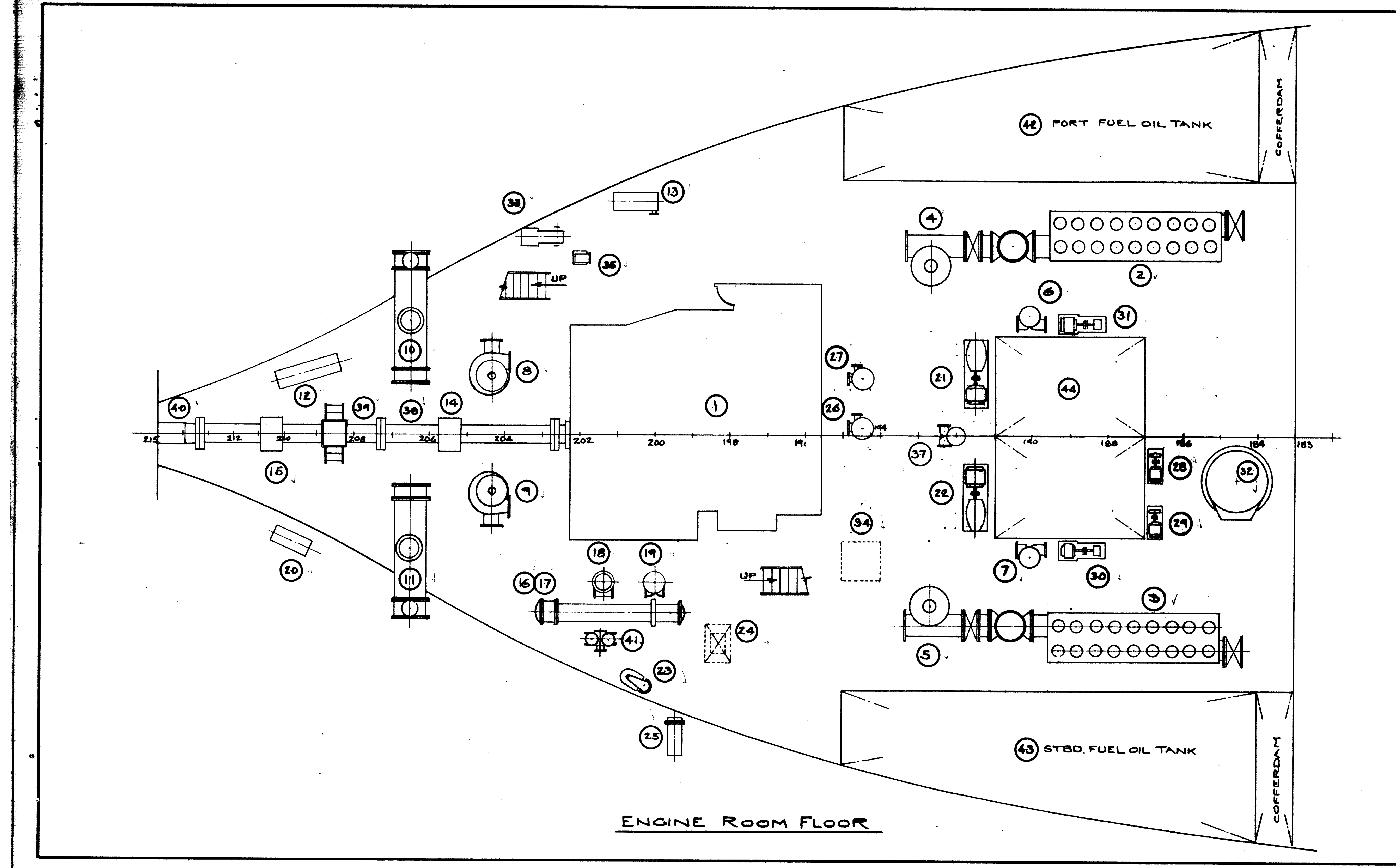
POOP DECK


COOKS
DESK
DRESSER
SING. BERTH
W.C.
S
L.
PORTERS
CHIFO DESK
RAD.
MESS TABLE
MESS ROOM
BROOM L.
CUPBOARDS
DISH WASHER
SINK
TABLE
RANGE
URN
GALLEY
DEEP FREEZE
REFRIGERATOR
MEAT BLOCK
SAW
PANTRY
REF
CUPBOARD
SIDEBOARD
CLOSET
DINING ROOM
PASSAGE
LOCKER
UP
DN.
RECREATION ROOM
FRESH AIR TRUNK
D. F.
STORE ROOM
CREWS LUGGAGE
VENTILATION ROOM
SOILED LINEN
BATTERY ROOM
LINENS
BLANKETS
DECKHANDS LOCKER
BOILER TRUNK
224
218
216
214
212
210
208
204
202
200
198
196
194
192
190
188
186
184
182
HOSPITAL
OILER FIREMAN
MAINTENANCE MEN
FIREMEN
OILERS
DECKHAND DECKWATCH
DECKWATCH
CLEANING GEAR
DECKHANDS
DOCK CREW W.C.
DECK LOCKER

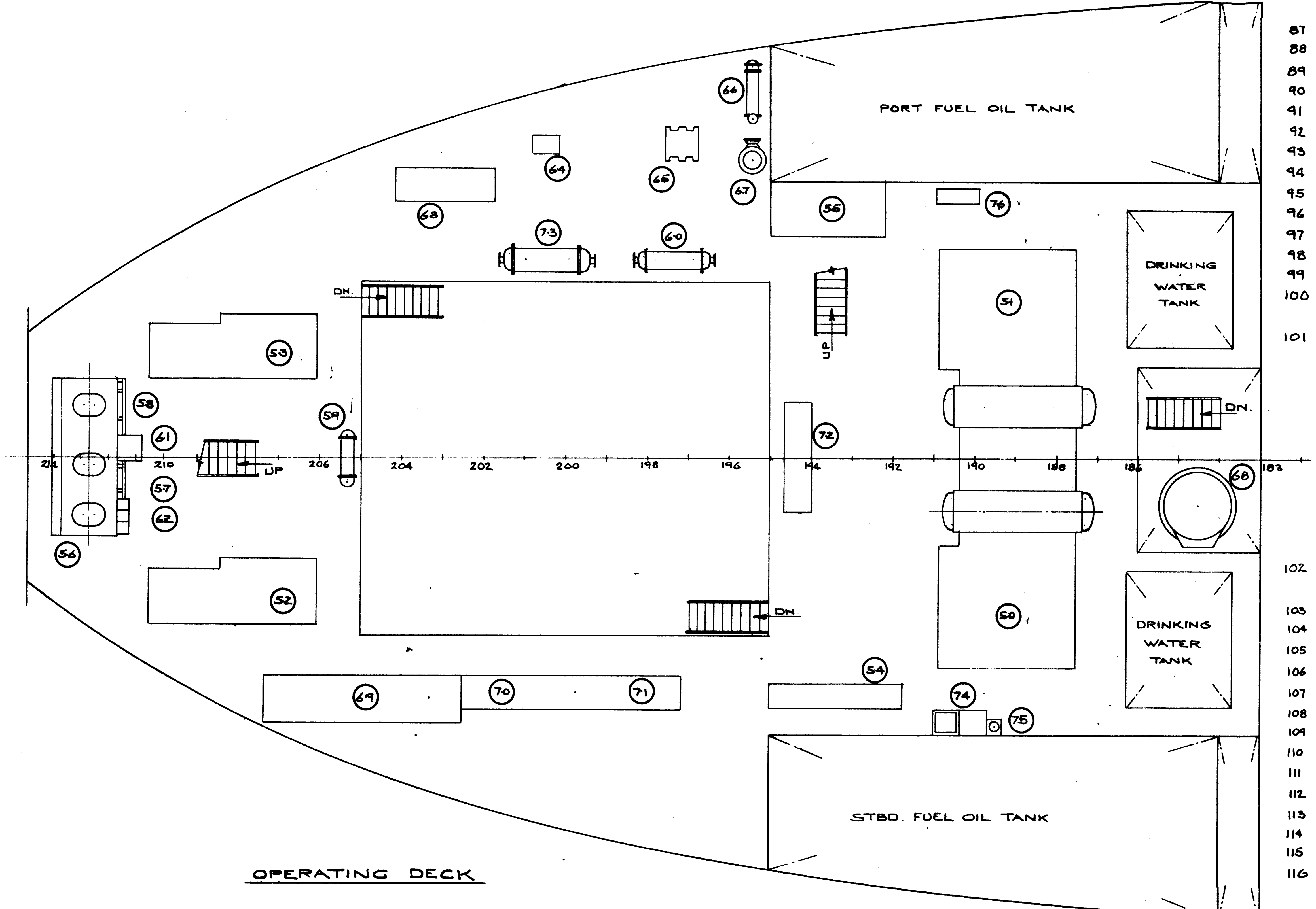
SPAR DECK AFT

SCALE 1/8" = 1'-0

SHEET No. 6 OF 9


PORT FUEL OIL TANK
STBD. FUEL OIL TANK
COFFERDAM
COFFERDAM
UP
UP

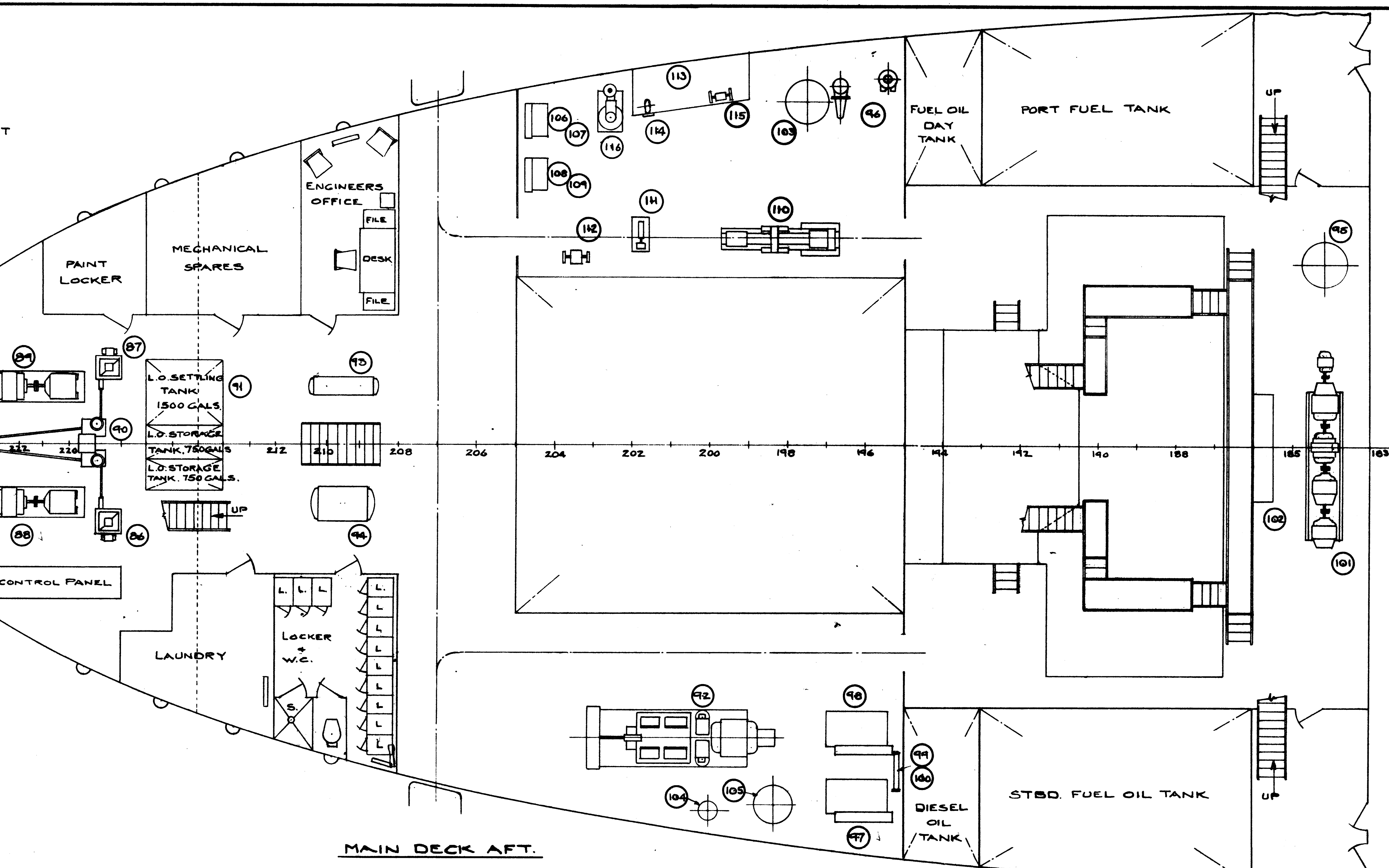
ENGINE ROOM FLOOR


PORT FUEL OIL TANK
STBD. FUEL OIL TANK
DRINKING WATER TANK
DRINKING WATER TANK
DN.
DN.
DN.
UP

OPERATING DECK

87 GYRO POWER UNIT No.2
88 OIL PUMP No.1
89 OIL PUMP No.2
90 HYDO. TRANSFER VALVE
91 3 COMPARTMENT L.O. TANK
92 200 K.W. DIESEL GENERATOR SET
93 GALLEY HOT WATER HEATER
94 SANITARY HOT WATER HEATER
95 SANITARY PRESSURE TANK
96 ORE THAWING HEATER
97 AIR COMPRESSOR No.1
98 AIR COMPRESSOR No.2
99 HIGH PRESSURE AFT COOLER #1
100 HIGH PRESSURE AFT. COOLER No.2
101 MOORING WINCH GEN. SET.

102 MOORING WINCH CONTROL BOARD.
103 FRESH WATER EVAP.
104 7 CU. FT. CAP. AIR RECIEVER
105 50 CU. FT. CAP AIR RECIEVER
106 MEAT LOCKER REFRIG. COMP.
107 ICE CUBE FREEZER COMP.
108 FROZEN FOOD LOCKER COMP.
109 FRUIT, VEG. AND DAIRY COMP.
110 LATHE.
111 POWER HACKSAW.
112 FLOOR GRINDER.
113 WORK BENCH.
114 BENCH VISE.
115 TABLE GRINDER.
116 DRILL PRESS.


PAINT LOCKER
MECHANICAL SPARES
ENGINEERS OFFICE
CONTROL PANEL
LAUNDRY
LOCKER & W.C.
FUEL OIL DAY TANK
PORT FUEL TANK
STBD. FUEL OIL TANK
DIESEL OIL TANK
UP
UP

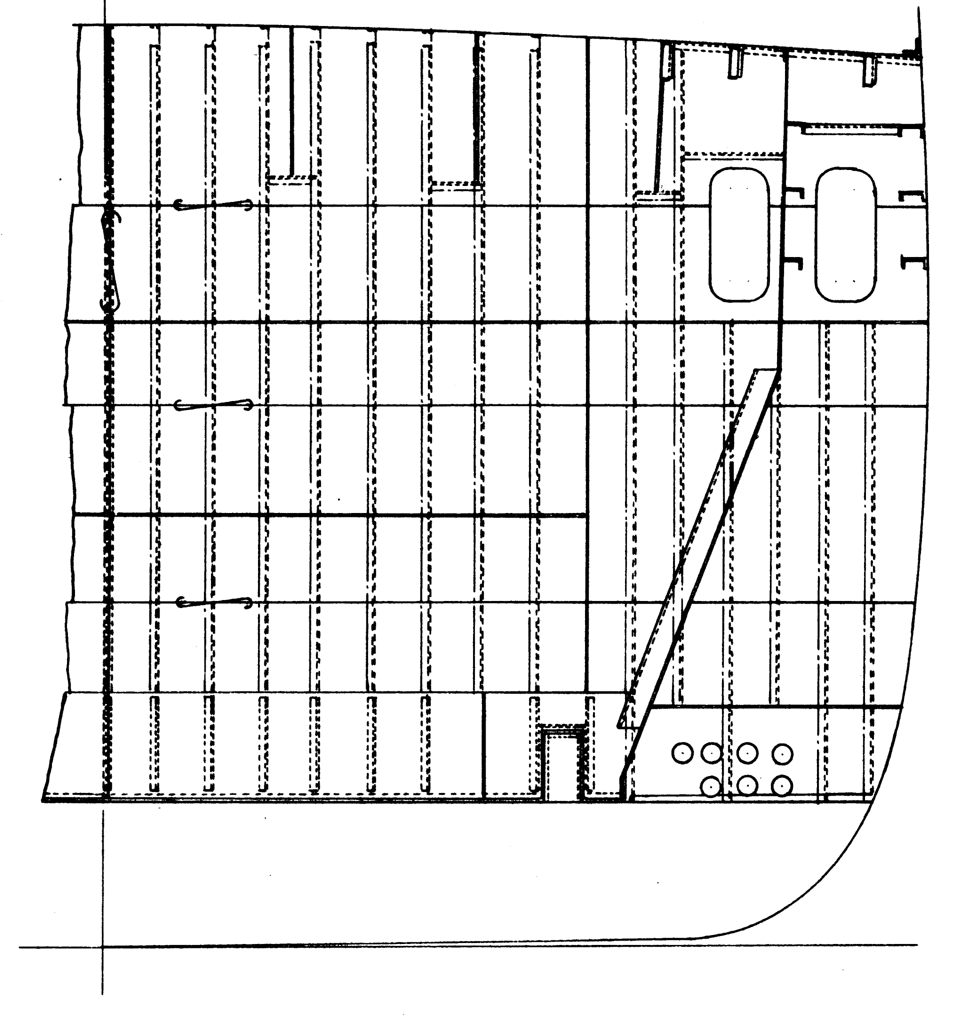
MAIN DECK AFT

MACHINERY LIST

1	MAIN PROPULSION UNIT.	44	RESERVE FEED WATER TANK
2	PORT BALLAST MANIFOLD No.2	45	
3	STBD. BALLAST MANIFOLD No.1	46	
4	PORT MAIN BALLAST PUMP No.2	47	
5	STBD. MAIN BALLAST PUMP No.1	48	
6	PORT AUX. BALLAST PUMP No.2	49	
7	STBD. AUX. BALLAST PUMP No.1	50	STBD. BOILER.
8	PORT CIRCULATING PUMP No.2	51	PORT BOILER
9	STBD. CIRCULATING PUMP No.1	52	STBD. TURBO GENERATOR
10	PORT AUX. CONDENSER No.2	53	PORT TURBO GENERATOR
11	STBD. AUX. CONDENSER No.1	54	COMBUSTION CONTROL PANEL
12	AUX. CONDENSATE PUMP. PORT	55	FUEL OIL BURNING EQUIPMENT.
13	GEN. SERVICE & COOLER PUMP	56	SEWAGE TANK
14	FWD. LINE SHAFT BEARING	57	SEWAGE PUMP No.1
15	AFT. LINE SHAFT BEARING	58	SEWAGE PUMP No.2
16	LUBE OIL COOLER No.1	59	AUX AIR EJECTORS & INTER COND'ER.
17	LUBE OIL COOLER No.2	60	MAIN AIR EJECTORS
18	LUBE OIL PUMP No.1	61	HYPO PUMP
19	LUBE OIL PUMP No.2	62	HYPO TANK
20	BILGE PUMP	63	MAIN FEED PUMP
21	PORT FIRE PUMP No.1	64	AUX. FEED PUMP
22	STBD. FIRE PUMP No.2	65	IN PORT FEED PUMP
23	LUBE OIL PURIFIER	66	DRAINS COOLER
24	LUBE OIL SLUDGE TANK	67	1ST STAGE FEED WATER HEATER
25	LUBE OIL HEATER	68	HEATING BOILER
26	MAIN CONDENSATE PUMP No.1	69	MAIN SWITCHBOARD
27	MAIN CONDENSATE PUMP No.2	70	CONTROL GROUP No.1
28	SANITARY PRESSURE PUMP No.1	71	CONTROL GROUP No.2
29	SANITARY PRESSURE PUMP No.2	72	MAIN CONTROL & GAGE BOARD
30	BALLAST PRIMING PUMP No.1	73	MAIN AFTER CONDENSER
31	BALLAST PRIMING PUMP No.2	74	LABORATORY TESTING SINK
32	HEAT - BOILER.	75	SAMPLE COOLER
33	SANITARY FILLING PUMP.	76	SAND BOX
34	ATMOSPHERIC DRAIN TANK	77	
35	PULSAFEEDER.	78	
36	HYPOCHLORITE TANK.	79	
37	FUEL OIL TRANSFER PUMP	80	
38	FWD. INTERMEDIATE SHAFT	81	
39	AFT. INTERMEDIATE SHAFT	82	
40	TAIL SHAFT.	83	
41	LUBE OIL STRAINER	84	
42	PORT FUEL TANK	85	STEERING GEAR
43	STBD. FUEL TANK	86	GYRO POWER UNIT No.1

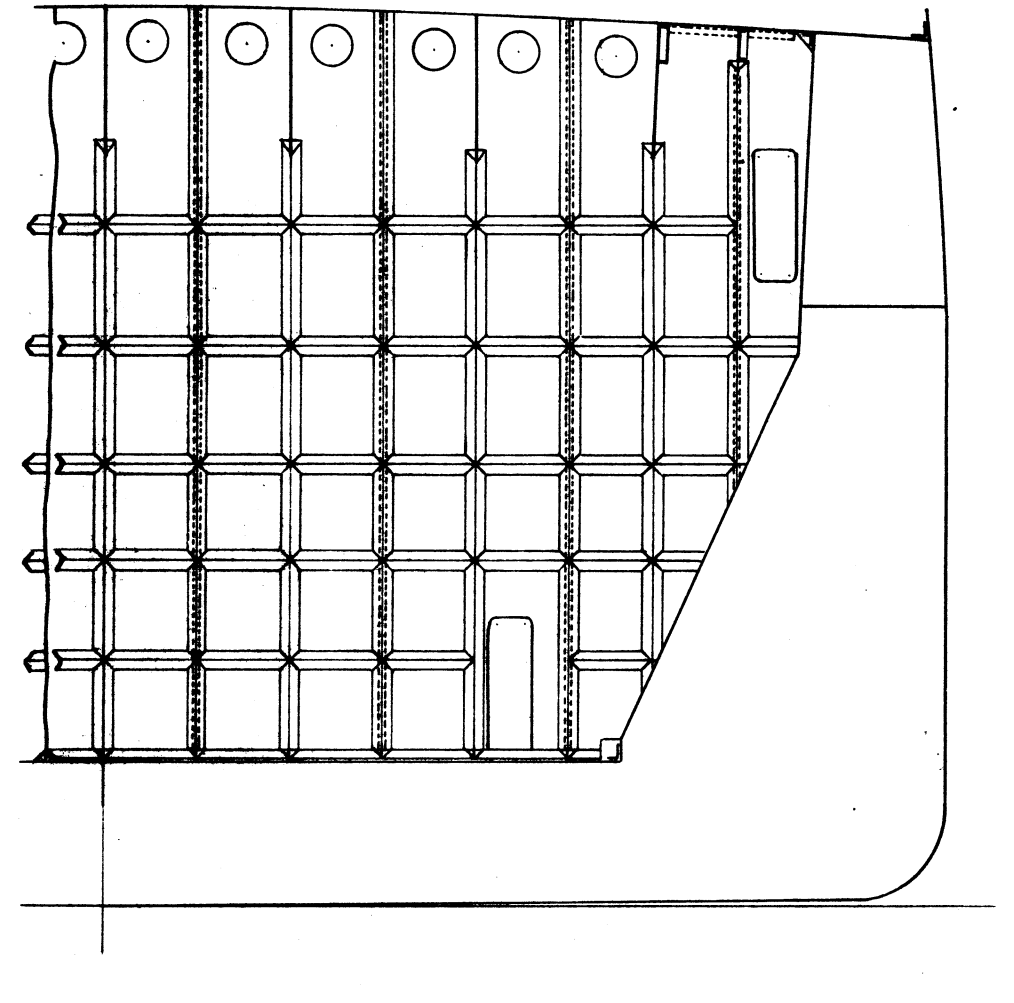
SCALE 1/8" = 1'-0

SHEET No.7 OF 9



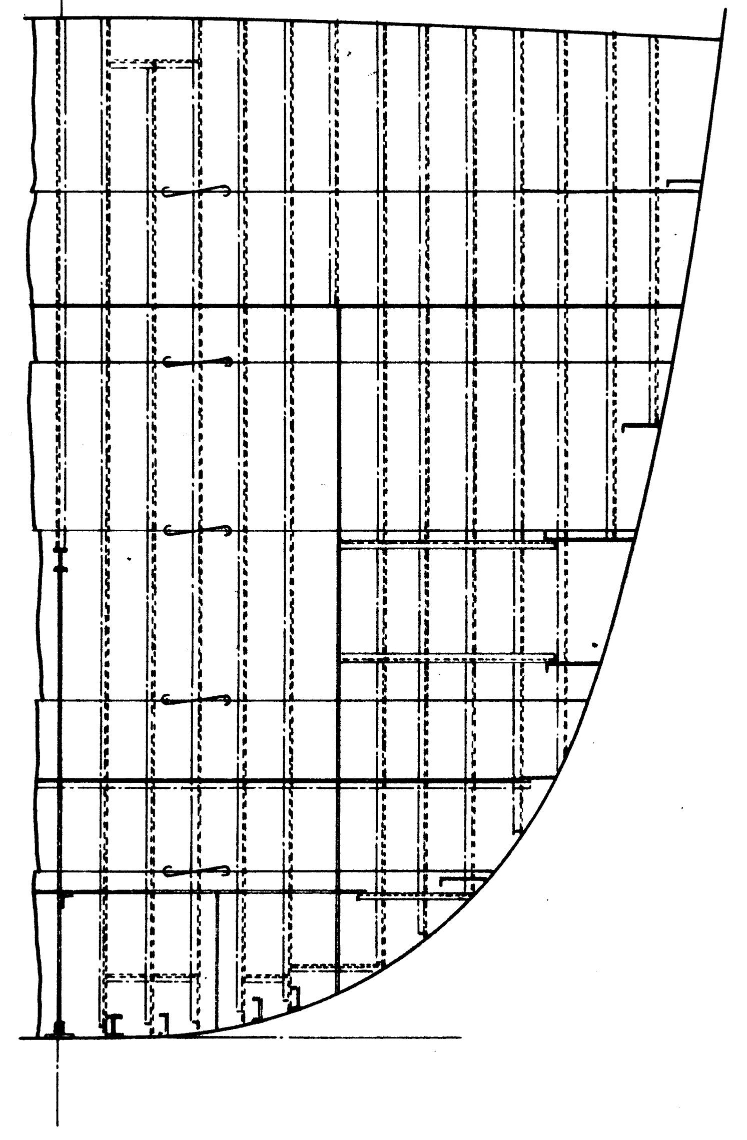
AFT CARGO HOLD BULKHEAD 183

LOOKING AFT



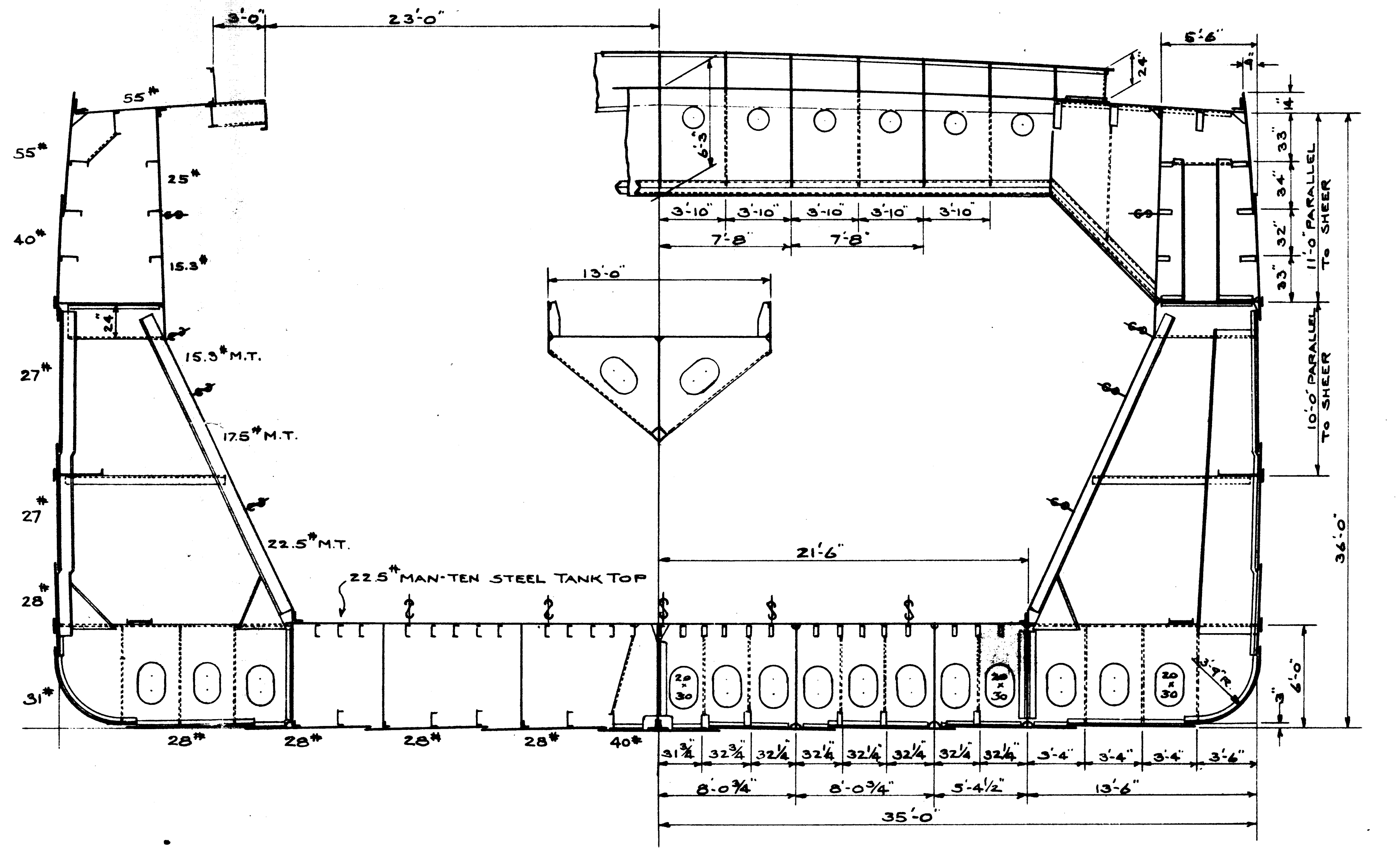
SCREEN BULKHEADS 79 AND 135

LOOKING FORWARD

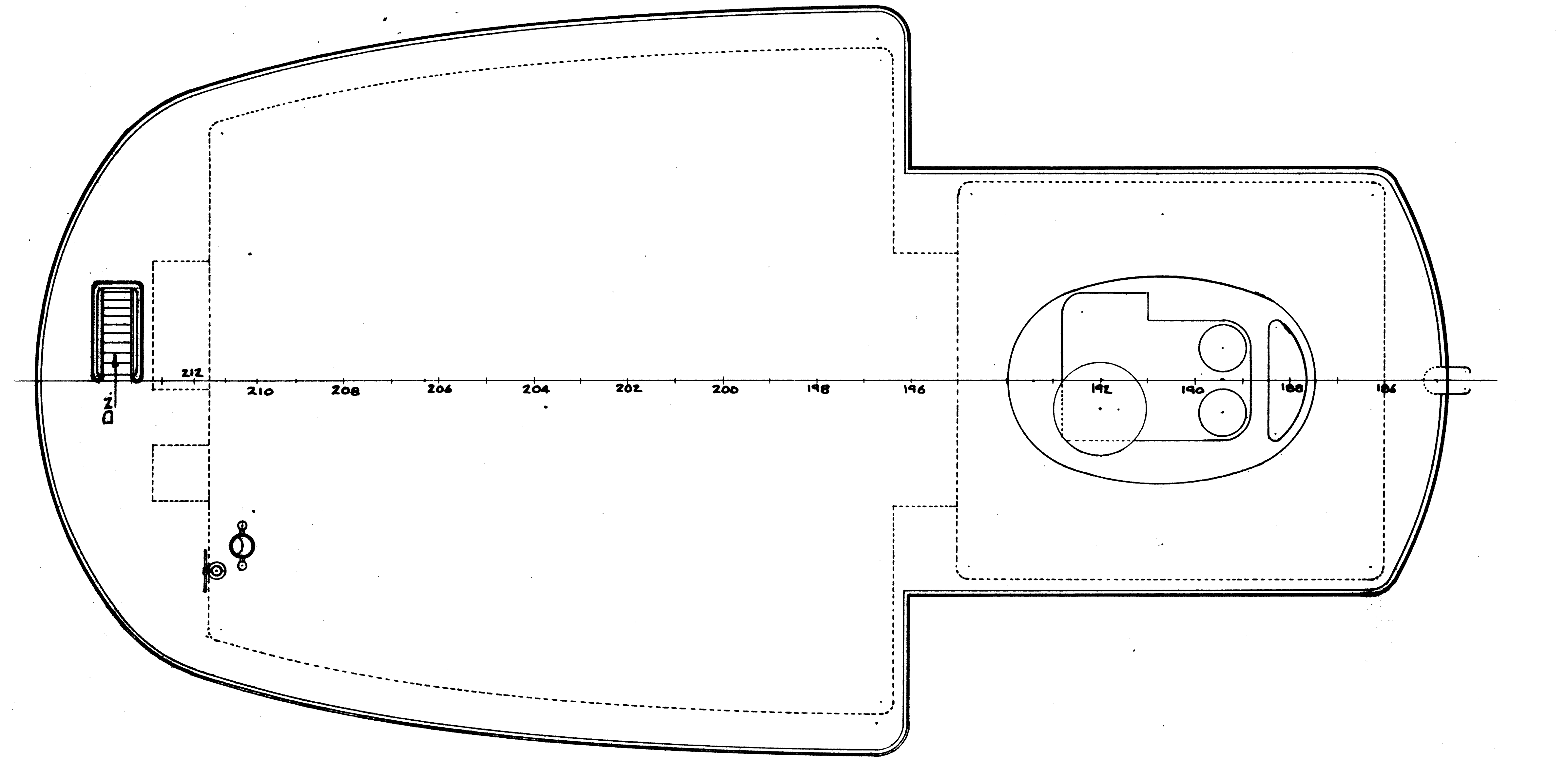


COLLISION BULKHEAD No.21 W.T.

LOOKING FORWARD


3'-0"
23'-0"
5'-6"
55#
55#
25#
40#
15.3#
24"
15.3# M.T.
17.5# M.T.
27#
27#
22.5# M.T.
28#
22.5# MAN-TEN STEEL TANK TOP
31#
28#
28#
28#
28#
40#
6'-3"
24"
9"
14"
33"
34"
32"
33"
11'-0" PARALLEL TO SHEER
10'-0" PARALLEL TO SHEER
36'-0"
3'-10"
3'-10"
3'-10"
3'-10"
3'-10"
7'-8"
7'-8"
13'-0"
21'-6"
20 x 30
20 x 30
20 x 30
3'-9" R.
6'-0"
3"
31 3/4
32 3/4
32 1/4
32 1/4
32 1/4
32 1/4
32 1/4
32 1/4
3'-4"
3'-4"
3'-4"
3'-6"
8'-0 3/4"
8'-0 3/4"
5'-4 1/2"
13'-6"
35'-0"

MIDSHIP SECTION


DN.
212
210
208
206
204
202
200
198
196
192
190
188
186

DECKHOUSE ROOF AFT

COMPLEMENT OF CREW

FORWARD CABINS

1......CAPTAIN
1......1ST MATE
1......2ND. MATE
1......3RD. MATE
1......BOATSWAIN
3......WHEELSMEN
3......WATCHMEN
11 MEN FORWARD CREW

34 MEN TOTAL CREW

AFTER CABINS

1......CHIEF ENGINEER
1......1ST. ENGINEER
1......2ND. ENGINEER
1......3RD. ENGINEER
1......4TH. ENGINEER
3......OILERS
3......FIREMEN
3......DECK WATCHMEN
3......DECK HANDS
2......MAINTENANCE MEN
19 MEN AFT CREW

1......STEWARD
1......2ND. COOK
2......PORTERS
4......MEN GALLEY CREW

4......OWNERS FORWARD
2......SPARES AFT

26......BATH ROOMS
1......DOCK CREWS W.C. (SPAR DK. AFT.)
1......SHOWER IN LOCKER ROOM (MAIN DK. AFT.)

1......CHART ROOM
1......OBSERVATION LOUNGE
2......STATE ROOMS
1......SPARE ROOM (POOP DK.)
1......HOSPITAL (SPAR DK. AFT)
1......RECREATION ROOM (SPAR DK. AFT.)
1......RECREATION ROOM (MAIN DK. FWD.)
1......DINING ROOM (SPAR DK. AFT)
1......MESS ROOM (SPAR DK. AFT.)
1......PANTRY (SPAR DK. AFT.)
1......GALLEY (SPAR DK. AFT.)
1......CAPTAIN'S OFFICE.
2......CHIEF ENGINEER OFFICES (POOP DK. + MAIN DK. AFT.)
1......MATES OFFICE (SPAR DK. FWD.)
2......LAUNDRY ROOMS (MAIN DK. FWD. + MAIN DK. AFT.)
1......LAMP ROOM (MAIN DK. AFT.)

2......PAINT ROOMS (MAIN DK. FWD. + MAIN DK. AFT.)
1......VENTILATION ROOM (SPAR DK. AFT.)
1......ELECTRICAL CONTROL ROOM (MAIN DK. FWD.)
1......MECHANICAL SPARES ROOM (MAIN DK. AFT.)
1......LOCKER ROOM (MAIN DK. AFT.)
1......STORE ROOM (SPAR DK. AFT.)
1......DECK HANDS LOCKER (SPAR DK. AFT.)
1......CREWS LUGGAGE ROOM (SPAR DK. AFT.)
1......DECK LOCKER (SPAR DK. AFT.)
1......LINEN ROOM (SPAR DK. AFT.)
1......SOILED LINEN ROOM (SPAR DK. AFT.)
1......CREWS DECK LOCKER (SPAR DK. FWD.)
1......OFFICERS DECK LOCKER (SPAR DK. FWD.)
1......DECK LOCKER (POOP DK.)
1......BATTERY ROOM (SPAR DK. AFT.)

CAPACITIES

HOLD CAPACITIES

HOLD NO. 1......
HOLD NO. 2......
HOLD NO. 3......

BALLAST TANK CAPACITIES

TANK NO. 1......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS
TANK NO. 2......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS
TANK NO. 3......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS
TANK NO. 4......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS
TANK NO. 5......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS
TANK NO. 6......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS
TANK NO. 7......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS
TANK NO. 8......	TONS STBD. SIDE +	TONS PORT SIDE	LONG TONS

FORE PEAK TANK......
AFT PEAK TANK......

TANK CAPACITIES

FUEL OIL TANK PORT SIDE......	74,740 GALS.
FUEL OIL TANK STBD. SIDE......	74,740 GALS.
FUEL OIL DAY TANK PORT SIDE......	4,031 GALS.
DIESEL OIL TANK STBD. SIDE......	4,031 GALS.
LUBE OIL SETTLING TANK......	1,500 GALS.
LUBE OIL STORAGE TANK......	750 GALS.
LUBE OIL STORAGE TANK......	750 GALS.
DRINKING WATER TANK FWD......	5,000 GALS.
DRINKING WATER TANK P. SIDE AFT......	4,700 GALS.
DRINKING WATER TANK S. SIDE AFT......	4,700 GALS.
RESERVE FEED WATER TANK......	16,845 GALS.

EQUIPMENT DATA

STEAM TURBINE (GENERAL ELECTRIC)
7000 S.H.P. NORMAL RATING CROSS COMPOUND AND DOUBLE REDUCTION GEAR.
SHAFT HORSE POWER (3650 H.P. AND 3350 L.P.) NORMAL RATING 7000 AND MAX. 7700
H.P. TURBINE R.P.M. NORMAL 5980
L.P. TURBINE R.P.M. NORMAL 4485
PROPELLER R.P.M. NORMAL 108 MAX. 111.5

ASTERN TURBINE DELIVER 2800 S.H.P. AT 54 PROPELLER R.P.M WITH NORMAL AHEAD FLOW AND INLET PRESSURE.

REDUCTION GEAR AND PINION DATA.
H.P. PINION (PITCH CIRCLE) = 10"
L.P. PINION (PITCH CIRCLE) = 13.35"
FIRST REDUCTION GEAR DIA. = 83.037"
LOW SPEED PINION DIA. = 21.067"
MAIN GEAR DIA. = 145.992"
H.P. FIRST REDUCTION RATIO = 8.3
L.P. FIRST REDUCTION RATIO = 6.22
SECOND REDUCTION RATIO = 6.93

CONDENSER PERFORMANCE
COOLING SURFACE SQ.FT. = 6500
NUMBER OF WATER PASSES = 2
STEAM CONDENSED 1LB/HR = 50,000
COOLING WATER SUPPLY. G.P.M. = 8600
COOLING WATER TEMPERATURE = 75

EJECTOR PERFORMANCE
OPERATING STEAM PRESSURE P.SIG = 180

TWO 12,000 LB. STOCKLESS BOWER ANCHORS.
ONE 10,000 LB. STOCKLESS STERN ANCHORS.
180 FATHOMS 2⅜" DIA. FORGED ALLOY STEEL STUD LINK CHAIN. (FORWARD)
90 FATHOMS 2⅜" DIA. CAST STEEL STUD LINK CHAIN. (AFT.)
300 FEET 8" CIR. THREE STRAND NYLON LINE. (FWD. TOW LINES)
120 FEET 8" CIR. THREE STRAND NYLON LINE. (AFT TOW LINES)
300 FEET 8" CIR. THREE STRAND MANILA LINE.
6 MOORING LINES 1⅛" DIA. 6x19 GALV. IMPROVED PLOW STEEL WIRE ROPE, 500 FEET EACH. (3000 FT.)
10 HEAVING LINES 1¼" CIR. BRAIDED LINE 100 FEET EACH. (1000 FT.)

STEERING GEAR. (C.H. WHEELER MFG. Co. ELECTRO-HYDRAULIC, RAPSON SLIDE TYPE.)

PROPELLER - FOUR BLADED SECTIONAL TYPE 17'-6" DIA. (MANGANESE BRONZE)

GENERATORS - TWO 400 K.W. GENERATORS, 450 VOLT, 3 PHASE, 60 CYCLE .8 POWER FACTOR. (G.E. CORP.)
ONE DIESEL ENGINE DRIVEN 185 K.W. GENERATOR, 450 V, 3 PHASE, 60 CYCLE. .8 POWER FACTOR. (G.E. CORP.)

TWO 25 PERSON CAPACITY LIFE BOAT.
ONE 18 PERSON CAPACITY LIFE RAFT. (CATAMARAN TYPE)
24 - 30" DIA. LIFE RING BUOYS.
52 CORK FILLED LIFE PRESERVER VESTS.

RUDDER ....UNBALANCED CONTRA-GUIDE RUDDER. (GOLDSCHMIDT TYPE)

BOILERS .....TWO FOSTER WHEELER BENT TUBE TYPE WATER TUBE, TWO DRUM BOILERS.
RATING NORMAL = 31,000 LBS. PER HR.
MAX. LOAD = 39,000 LBS. PER HR.
NORMAL LOAD STEAM PRESSURE AT SUPERHEATER OUTLET = 450 P.S.I.G.
NORMAL LOAD STEAM TEMPERATURE AT SUPERHEATER OUTLET = 750 °F.T.T
NORMAL LOAD AIR TEMPERATURE FROM AIR HEATER = 290° F.
FEED WATER TEMPERATURE TO ECONOMIZER = 240° F.

HULL NUMBERS 867 AND 868

PRINCIPAL DIMENSIONS

LENGTH OVERALL......	647'-0"
LENGTH BETWEEN PERPENDICULARS......	629'-3"
LENGTH ON KEEL......	620'-0"
BREADTH MOLDED......	70'-0"
DEPTH MOLDED......	36'-0"
DESIGNED SUMMER DRAFT......	25'-0"
SHEER FORWARD......	6'-10"
SHEER AFT......	5'-3"
LENGTH CARGO HOLD No. 1......	150'-0"
LENGTH CARGO HOLD No. 2......	168'-0"
LENGTH CARGO HOLD No. 3......	144'-0"

CAMBER 16" IN 68'-6"
DEAD RISE = 3"
TUMBLE HOME = 9"
BILGE RADIUS = 3'-9"

OFFICAL NO. =
GROSS TONNAGE =
NET TONNAGE =